CLAIMS

What is claimed is:

1. A knockout mammal, said mammal comprising a disruption in an endogenous α-tocopherol transfer protein gene (*Ttpa*), wherein said disruption results in said knockout mammal exhibiting a decreased level of α-tocopherol transfer protein (α-TTP) as compared to a wild-type animal.

2. The mammal of claim 1, wherein the mammal is selected from the group consisting of an equine, a bovine, a rodent, a porcine, a lagomorph, a feline, a canine, a murine, a caprine, an ovine, and a non-human primate.

3. The mammal of claim 1, wherein the disruption is selected from the group consisting of an insertion, a deletion, a frameshift mutation, a substitution, and a stop codon.

4. The mammal of claim 3, wherein the disruption comprises an insertion of an expression cassette into the endogenous *Ttpa* gene.

5. The mammal of claim 4, wherein said expression cassette comprises a selectable marker.

6. The mammal of claim 4, wherein the expression cassette comprises a neomycin phosphotransferase gene operably linked to at least one regulatory element.

7. The mammal of claim 4, wherein the expression cassette is inserted into exon 1 of the endogenous *Ttpa* gene.

8. The mammal of claim 2, wherein said disruption is in a somatic cell.

9. The mammal of claim 2, wherein said disruption is in a germ cell.

10. The mammal of claim 2, wherein the mammal is homozygous for the disrupted *Ttpa* gene.

11. The mammal of claim 2, wherein the mammal is heterozygous for the disrupted *Ttpa* gene.

12. The mammal of claim 2, wherein said mammal further comprises a second recombinantly disrupted gene.

13. The mammal of claim 12, wherein said second gene comprises a disruption that prevents the expression of a functional polypeptide from said disrupted second gene.

14. The mammal of claim 13, wherein the mammal is homozygous for said disrupted second gene.

15. The mammal of claim 13, wherein the mammal is heterozygous for said disrupted second gene.

16. The mammal of claim 12, wherein the second gene is selected from the group consisting of an *apo E* gene, and an APP gene.

17. A mammalian model of atherosclerosis, said model comprising a rodent comprising:

a disruption in an endogenous α-tocopherol transfer protein gene (*Ttpa*), wherein said disruption results in said knockout rodent exhibiting decreased levels of α-tocopherol transfer protein (α-TTP) as compared to a wild-type animal; and

wherein said rodent exhibits reduced expression of *apo E* as compared to a healthy wildtype rodent of the same species.

18. The mammalian model of claim 17, wherein said rodent is the F1 progeny of a cross between a rodent comprising a disruption in an endogenous α-tocopherol transfer protein gene and a mammal showing reduced expression of *apo E* as compared to a healthy wildtype rodent of the same species.

19. The mammalian model of claim 17, wherein said rodent is heterozygous for a disruption in an endogenous α-tocopherol transfer protein gene.

20. The mammalian model of claim 17, wherein said rodent is homozygous for a disruption in an endogenous α-tocopherol transfer protein gene.

21. The mammalian model of claim 17, wherein said rodent comprises a disruption in an endogenous *apo E* gene, wherein said disruption results in said knockout rodent exhibiting decreased levels of *apo E* as compared to a wild-type animal.

22. The mammalian model of claim 21, wherein said rodent is homozygous for said disruption in an endogenous *apo E* gene.

23. The mammalian model of claim 21, wherein said rodent is homozygous for said disruption in an endogenous *apo E* gene.

24. The mammalian model of claim 21, wherein said rodent is homozygous for said disruption in an endogenous α-tocopherol transfer protein gene and homozygous for said disruption in an endogenous *apo E* gene.

25. The rodent of claim 17, wherein the rodent is a mouse.

26. The rodent of claim 17, wherein the disruption is selected from the group consisting of an insertion, a deletion, a frameshift mutation, a substitution, and a stop codon.

27. A knockout rodent comprising a disruption in an endogenous α-tocopherol transfer protein gene (*Ttpa*) wherein said disruption results in said knockout rodent exhibiting decreased levels of α-tocopherol transfer protein (α-TTP) as compared to a wild-type animal.

28. The rodent of claim 27, wherein the rodent is a mouse.

29. The rodent of claim 27, wherein the disruption is selected from the group consisting of an insertion, a deletion, a frameshift mutation, and a stop codon.

30. The rodent of claim 27, wherein the disruption comprises an insertion of an expression cassette into the endogenous *Ttpa* gene.

31. The rodent of claim 30, wherein the expression cassette comprises a selectable marker.

32. The rodent of claim 30, wherein the expression cassette comprises a neomycin phosphotransferase gene operably linked to at least one regulatory element.

33. The rodent of claim 30, wherein the expression cassette is inserted into exon 1 of the endogenous *Ttpa* gene.

34. The rodent of claim 27, wherein said disruption is in a somatic cell.

35. The rodent of claim 27, wherein said disruption is in a germ cell.

36. The rodent of claim 27, wherein the rodent is homozygous for the disrupted *Ttpa* gene.

37. The rodent of claim 27, wherein the rodent is heterozygous for the disrupted *Ttpa* gene.

38. The rodent of claim 27, wherein said rodent further comprises a second recombinantly disrupted gene.

39. The rodent of claim 38, wherein said second gene comprises a disruption and wherein said disruption prevents the expression of a functional product from said disrupted second gene.

40. The rodent of claim 39, wherein the rodent is homozygous for said disrupted second gene.

41. The rodent of claim 39, wherein the rodent is heterozygous for said disrupted second gene.

42. The second gene of claim 39, wherein the second gene is selected from the group consisting of an *apo E* gene, and an APP gene.

43. A nucleic acid for disrupting an α-tocopherol transfer protein gene, said nucleic acid comprising:

α-tocopherol transfer protein gene sequences that undergo homologous recombination with an endogenous α-tocopherol transfer protein gene; and

a nucleic acid sequence that, when introduced into an α-tocopherol transfer protein gene inhibits expression of said α-tocopherol transfer protein gene.

44. The nucleic acid of claim 43, wherein said nucleic acid when introduced into an α-tocopherol transfer protein gene creates a disruption selected from the group consisting of an insertion, a deletion, a frameshift mutation, and a stop codon.

45. The nucleic acid of claim 44 wherein the disruption comprises an insertion of an expression cassette into the endogenous *Ttpa* gene.

46. The nucleic acid of claim 45, wherein said expression cassette comprises a selectable marker.

47. The nucleic acid of claim 46, wherein the expression cassette comprises a neomycin phosphotransferase gene operably linked to at least one regulatory element.

48. The nucleic acid of claim 43, wherein said nucleic acid comprises *Ttpa* nucleic acid sequences flanking a nucleic acid encoding a *Ttpa* disruption.

49. The nucleic acid of claim 48, wherein said nucleic acid is present in a vector.

50. A nucleic acid comprising a nucleic acid encoding a disrupted α-tocopherol transfer protein gene (*Ttpa*) wherein the disruption prevents the expression of a functional α-tocopherol transfer protein (α-TTP) from said nucleic acid.

51. The nucleic acid of claim 50, wherein said nucleic acid comprises a disruption selected from the group consisting of an insertion, a deletion, a frameshift mutation, and a stop codon.

52. The nucleic acid of claim 50, wherein said nucleic acid is a deoxyribonucleic acid (DNA).

53. The nucleic acid of claim 50, wherein said nucleic acid is in a mammalian cell.

54. A mammalian cell comprising a disruption in an endogenous α-tocopherol transfer protein gene (*Ttpa*) wherein said disruption results in said cell exhibiting decreased levels of α-tocopherol transfer protein (α-TTP) as compared to a wild-type animal.

55. The cell of claim 54, wherein said cell of a mammal is selected from the group consisting of an equine, a bovine, a rodent, a porcine, a lagomorph, a feline, a canine, a murine, a caprine, an ovine, and a non-human primate.

56. The cell of claim 54, wherein the cell is a rodent cell.